10900-B Stonelake Boulevard, Suite 126 · Austin, Texas 78759 U.S.A.
Phone: +1-512-498-9434 (WIFI) · Fax: +1-512-498-9435
www.wi-fi.org

VIA ELECTRONIC FILING

May 17, 2019

Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 201154

Re: **Written *Ex Parte* Communication**

ET Docket No. 18-295: *Unlicensed Use of the 6 GHz Band*; and

GN Docket No. 17-183: *Expanding Flexible Use of Mid-Band Spectrum Between 3.7 GHz and 24 GHz*

Dear Ms. Dortch:

The record in this proceeding shows that the Commission should move quickly to establish rules for Wi-Fi access in the 5925-7125 megahertz (the "6 GHz") band. It demonstrates that there is an immediate need for more spectrum capacity for Wi-Fi and that the 6 GHz band remains the ideal spectrum to satisfy that requirement.[1/] Wi-Fi Alliance and others have explained that there is no significant potential for harmful interference from unlicensed devices – whether low-power indoor ("LPI") or standard power devices – to licensed incumbent operations in the band.[2/] LPIs can operate throughout the band without automatic frequency coordination ("AFC") and AFC will protect incumbents from standard-power operations.

Just as the technical case for use of the 6 GHz band for unlicensed devices is clear, so is the legal precedent, despite claims to the contrary by the Fixed Wireless Communications Coalition

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1/ *See, e.g., Comments of Cisco*, ET Docket No. 18-295 at 3-8 (Feb. 15, 2019); *Comments of Los Angeles, CA*, ET Docket No. 18-295 at 2-4 (Feb. 15, 2019); and *Comments of the Friday Institute for Educational Innovation at North Carolina State University*, ET Docket No. 18-295 at 2 (Feb. 14, 2019). *See also* CISCO, VNI Complete Forecast Highlights Tool, North America, United States, Wired Wi-Fi and Mobile Growth (2018), http://www.cisco.com/c/m/en_us/solutions/service-provider/vni-forecasthighlights.html (select "United States" from the "North America" drop-down menu, select "2022 Forecast Highlights" and expand "Wired Wi-Fi and Mobile Growth.") (finding that "fixed/Wi-Fi was 50.4% of total Internet traffic in 2017, and will be 56.6% by 2022.").

2/ *See, e.g., Reply Comments of Wi-Fi Alliance*, ET Docket No. 18-295 at 9-15 and 18-30 (Mar. 18, 2019) ("*WFA Reply Comments*"); *Letter from Alex Roytblat, Senior Director of Regulatory Affairs, Wi-Fi Alliance to Marlene H. Dortch, Secretary, FCC*, ET Docket No. 18-295 (Apr. 30, 2019); and *Comments of Hewlett Packard Enterprise Company*, ET Docket No. 18-295 at 24-30 (Feb. 15, 2019).

("FWCC").[3/] Specifically, FWCC cites a decision of the Court of Appeals to claim that the Commission may only authorize unlicensed devices "where it has determined that they will not cause harmful interference to licensed services," but the decision does not say that.[4/] In fact, the ruling says nearly the opposite, affirming longstanding precedent that the Commission may permit the use of unlicensed devices when it finds there is not a "significant potential" for harmful interference to licensed operations. That is precisely what the record demonstrates in this proceeding, meaning the Commission has the authority to permit unlicensed devices to access the entire 6 GHz band.

ARRL v. FCC Provides Support for The Commission's Proposal

FWCC bases its flawed assertion on a 2007 challenge by the Amateur Radio Relay League ("ARRL") of the Commission's authority to allow unlicensed broadband over power lines ("BPL"). ARRL asserted that the Commission's decision would permit harmful interference to amateur operations in spectrum between 1.7-80 MHz.[5/] It argued that Section 301 of the Communications Act of 1934 (the "Act") prohibits unlicensed operations where there is *any interference* with licensed operations. In the underlying rulemaking proceeding, the Commission had determined that, when unlicensed operations caused harmful interference, devices could reduce power by 20 dB, rather than ceasing operations entirely, which ARRL claimed was a violation of the Act's general requirement that devices which interfere with licensed transmissions themselves be licensed.

The D.C. Circuit upheld the Commission's decision, noting that "Commission precedent does not require the elimination of all interference at all times" in allowing unlicensed operations.[6/] The court made clear that the Commission's judgment, that the risk of harmful interference was sufficiently small with reduced BPL power, was justified.[7/] The court noted that "the Commission has long interpreted section 301 of the Act to allow the unlicensed operation of a device that emits radio frequency energy as long as it does not transmit enough energy to have a significant potential for causing harmful interference to licensed radio operators."[8/] Importantly, the court noted that it is up to the Commission to determine how best to balance licensed and unlicensed use.[9/]

3/ *Letter from Chen-yi Liu*, Counsel for the Fixed Wireless Communications Coalition, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295 *et al*., May 3, 2019.

4/ *Id*. at 10 (citing to *Amateur Radio Relay League v. FCC*, 524 F.3d 227 (D.C. Cir. 2008)).

5/ *ARRL* at 231-33.

6/ *Id*. at 234-35.

7/ This determination included the expectation that mobile operators could move if necessary, if they experienced harmful interference. Notably, Wi-Fi advocates and the Commission do not expect this type of accommodation from FS incumbents.

8/ *ARRL* at 234.

9/ *Id*.

In other words, the case to which FWCC cites makes clear that the Commission has the authority to find that Section 301's licensing requirement does not apply to devices for which there is a lack of "significant potential for causing harmful interference to licensed radio operators," and therefore allow unlicensed operations under Section 302. It holds that there is no requirement that the Commission find that those unlicensed operations "will not" cause harmful interference, as FWCC has claimed. It must only find, consistent with precedent, that there is no significant potential for such interference. Nor is there a requirement that there be no significant potential of *all* interference – just a lack of significant potential for *harmful* interference.[10/] Indeed, the court even supported the Commission's expectation that licensed users may be required to take actions in response to harmful interference (moving to a new location) rather than placing the entire burden on unlicensed operators.[11/]

The Commission's Legal Authority and Longstanding Precedent Supports the Commission's Proposal

Not only is FWCC's reliance on the particular case it cites misplaced, but it misstates generally the Commission's authority to authorize unlicensed devices. Section 302 of the Act grants the Commission the authority to, "consistent with the public interest, convenience, and necessity, make reasonable regulations…governing the interference potential of devices which in their operation are capable of emitting radio frequency energy by radiation, conduction, or other means in sufficient degree to cause harmful interference to radio communications."[12/]

In utilizing its authority under this provision, the Commission has focused on reducing, *but not eliminating*, the potential for harmful interference. In fact, the Commission frequently authorizes unlicensed operations with the knowledge that there is some risk of interference, including harmful interference.

For example, in the Commission's "white space" proceeding, it addressed the question of allowing unlicensed devices to operate at shorter distances from co-channel television contours than it had previously permitted, under certain conditions. The Commission noted that potential interference between white space devices and terrestrial wireless carrier handsets at this distance could cause handsets to function "at a slightly slower data rate," but determined that this did not rise to the level of harmful interference.[13/] The Commission further noted that "it is not possible

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[10/] This holding is particularly relevant in considering the use of excess fade margin in finding the lack of significant potential for harmful interference, which the Commission notes is generally not required to ensure the integrity of the fixed link in question.

[11/] Wi-Fi Alliance and others have not asked the Commission to take that position in the case of the 6 GHz band. Indeed, such a requirement is unnecessary because there will be no significant potential for harmful interference to fixed service ("FS") incumbents.

[12/] 47 U.S.C. § 302(a).

[13/] *In re Amendment of Part 15 of the Commission's Rules et al.*, 30 FCC Rcd 9551, ¶ 131 (2015). The Commission found that actual harmful interference from white space devices to wireless devices at the technical limits it adopted "would be an extremely unlikely event due to a variety of factors that would need to occur simultaneously." *Id.* at ¶ 132. Wi-Fi Alliance has similarly demonstrated that claims of harmful interference rely on a series of unlikely events. *See WFA Reply Comments* at 9-15.

to ensure that harmful interference will never occur" and that its rules recognize this fact, since they impose responsibilities on unlicensed users to eliminate such interference or cease operations.[14/] If the Commission is required to demonstrate that harmful interference "will not" occur, then there would be no point in mechanisms to ameliorate harmful interference.

Similarly, in its proceeding to authorize radio-frequency identification ("RFID") devices in the 433 MHz band, the Commission noted that, in the absence of a "significant potential for interference to licensed services," unlicensed devices would be permitted.[15/] The Commission rejected the argument that it lacked authority to authorize RFID devices at the designated power levels on an unlicensed basis because they would pose a significant potential for interference to licensed services; it specifically found that it did not need to reach the statutory argument as to its authority because it found no significant potential for harmful interference.[16/]

The Commission made the same point in a proceeding concerning the use of unlicensed transmitters in the 24.05-24.25 GHz band, declining to address concerns about its legal authority in the absence of a "significant interference potential."[17/] While ARRL, which was also the petitioner in this case, asserted that the Commission improperly determined that the interference risk did not rise to a level justifying prohibiting unlicensed operations, it acknowledged that "the Commission is the proper authority to draw the line in each instance."[18/] And in rejecting ARRL's claims, the Commission affirmed its line-drawing judgment, determining there was no "significant" or "substantial" interference potential to licensed amateur services. It determined that, because there was no significant potential for interference, it need not reach ARRL's Section 301 argument as to the Commission's legal authority to authorize these unlicensed operations, since its authority in the face of a lack of "significant" or "substantial" interference risk was clear.[19/]

In this proceeding, the record convincingly demonstrates that there is no "significant potential" for harmful interference under the proposed operating parameters. The Commission has authority to draw the line regarding the potential for harmful interference in this proceeding, as it has in many others. Therefore, a decision to allow these operations would be consistent with longstanding Commission precedent and within the Commission's well-established legal authority.

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14/ *Id.* at ¶ 132.

15/ *Review of Part 15 and other Parts of the Commission's Rules*, 19 FCC Rcd 7484 (2004).

16/ *See id.* at ¶ 26.

17/ *In re Amendment of Part 15 of the Commission's Rules et al*, 18 FCC Rcd 15944 (2003).

18/ *Id.* at ¶ 4-5.

19/ *Id.* at ¶ 10. The Commission found that ARRL's arguments did little more than disagree with the Commission's technical analysis and conclusions concerning interference potential. "Bare disagreement, absent new facts and arguments, is insufficient grounds for granting reconsideration."

Wi-Fi Alliance urges the Commission to move quickly to adopt an Order establishing rules granting unlicensed devices like Wi-Fi access to the entire 6 GHz band. This access should be restricted to either low-power indoor-only operations or to standard-power operations governed by an Automatic Frequency Coordination system, the regulations for which would be focused on performance-based criteria which allow for maximum innovation and flexibility in design. Doing so will address the urgent need for Wi-Fi spectrum, expand broadband connectivity, promote innovation and contribute to economic growth, as Wi-Fi has been doing for decades.

Pursuant to Section 1.106 of the Commission's rules, a copy of this letter has been submitted in the record of the above reference proceedings. If there are any questions regarding the foregoing, please contact the undersigned.

Respectfully submitted,

/s/ Alex Roytblat

WI-FI ALLIANCE
Alex Roytblat
Senior Director of Regulatory Affairs

aroytblat@wi-fi.org